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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/065,377	10/10/2002	Michael Tallman	KEL-86	1013
23583	7590	05/17/2005	EXAMINER	
SCALLY SCALLY AND MCMAHON, P.A. 3 HUNTER LAKE COURT UPPERCO, MD 21155			BULLOCK, IN SUK C	
			ART UNIT	PAPER NUMBER
			1764	
DATE MAILED: 05/17/2005				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/065,377	Applicant(s) TALLMAN ET AL.	
	Examiner In Suk Bullock	Art Unit 1764	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 October 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) 14-18 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☒ Claim(s) 1-18 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 October 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

Restriction to one of the following inventions is required under 35 U.S.C. 121:

- I. Claims 1-12, drawn to a method for recovering fines, classified in class 208, subclass 113.
- II. Claims 14-18, drawn to a system for recovering fines, classified in class 422, subclass 147.

Claim 13 link(s) inventions I and II. The restriction requirement between the linked inventions is subject to the nonallowance of the linking claim(s), claim 13. Upon the allowance of the linking claim(s), the restriction requirement as to the linked inventions shall be withdrawn and any claim(s) depending from or otherwise including all the limitations of the allowable linking claim(s) will be entitled to examination in the instant application. Applicant(s) are advised that if any such claim(s) depending from or including all the limitations of the allowable linking claim(s) is/are presented in a continuation or divisional application, the claims of the continuation or divisional application may be subject to provisional statutory and/or nonstatutory double patenting rejections over the claims of the instant application. Where a restriction requirement is withdrawn, the provisions of 35 U.S.C. 121 are no longer applicable. *In re Ziegler*, 44 F.2d 1211, 1215, 170 USPQ 129, 131-32 (CCPA 1971). See also MPEP § 804.01.

Inventions I and II are related as process and apparatus for its practice. The inventions are distinct if it can be shown that either: (1) the process as claimed can be practiced by another materially different apparatus or by hand, or (2) the apparatus as

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claimed can be used to practice another and materially different process. (MPEP § 806.05(e)). In this case the apparatus as claimed can be used to practice another and materially different process such as removal of particulate carbon from pyrolytically cracked hydrocarbons.

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

During a telephone conversation with Mr. Daniel Lundeen on April 20, 2005 a provisional election was made with traverse to prosecute the invention of a method for recovering fines, claims 1-13. Affirmation of this election must be made by applicant in replying to this Office action. Claims 14-18 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 5,073,249 to Owen (hereinafter Owen).

Owen teaches a process for fluidized catalytic cracking comprising catalytically cracking a feed in the riser reactor, separating cracked product vapor and a spent catalyst, stripping and regenerating said spent catalyst to produce regenerated catalyst which is recycled to the riser reactor, contacting the hot cracked vapor product with a heavy quench liquid, and fractionating the quenched vapor product to recover catalytically cracked products. A heavy liquid, such as slurry oil from the main column,

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is removed from the bottom of the quench drum, is pumped through a cooler, and the cooled liquid is recycled to the quench drum for contacting with the hot vapor product. The quench liquid accumulates in a pool in the base of the quench drum. See col. 5, lines 26-48 and col. 7, line 45 thru col. 8, line 9. A large amount of catalyst fines will collect in the quench liquid and should be removed by means such as filters (col. 8, lines 21-28).

Owen does not teach continuously separating fines from a stream of the quench oil from the inventory.

However, Owen does teach that there would be a build up of catalyst fines in the quench oil at the bottom of the quench drum and that some provision should be made to remove the fines. In light of this teaching, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the process of Owen and continuously separate fines from a stream of the quench oil from the inventory as required or in a continuous scheme with the expectation of achieving similar results.

Claims 4-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 5,073,249 to Owen (hereinafter Owen) in view of U.S. Patent 4,285,805 to Stegelman (hereinafter Stegelman).

The teachings of Owen are discussed above.

Owen does not teach alternating first and second filters between filtration and backwashing modes.

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Stegelman teaches a process for removal of catalyst particles from a liquid hydrocarbon fraction in a catalytic cracking process (col. 1, lines 8-11). The process comprises passing slurry oil containing catalyst particles from the bottom of the product fractionator to individual electrostatic filters in a filtration zone containing as many as eight or more filters. The arrangement of filters and control system is such that any individual filter or group of filters can be isolated from the process and backflushed periodically while maintaining the filtering operation in the remaining filters. See col. 5, lines 11-26 and lines 56-63. The catalyst-heavy backflush fluid can be recycled to the cracking zone (col. 6, lines 11-12).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the process of Owen and employed the filtration and backwashing steps as taught by Stegelman because Owen suggested it is desirable to remove catalyst fines by means of filtration (col. 8, lines 21-24) and Stegelman is directed to a similar process as that of Owen. Additionally, Stegelman has disclosed the use of electrostatic filters is a preferred and known method for removing finely-divided particles from a hydrocarbon fraction (col. 1, lines 30-33).

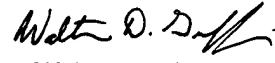
Any inquiry concerning this communication or earlier communications from the examiner should be directed to In Suk Bullock whose telephone number is 571-272-5954. The examiner can normally be reached on Monday - Friday 7:30-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Caldarola can be reached on 571-272-1444. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

I.B.


Walter D. Griffin
Primary Examiner